

REMARKS

The Office Action and the cited and applied references have been carefully reviewed. No claim is allowed. Claims 1-20 presently appear in this application and define patentable subject matter warranting their allowance. Reconsideration and allowance are hereby respectfully solicited.

Claims 1-20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Halazy et al., WO 01/47920 in view of Bennett et al., *Current Opinion in Pharmacology* 3:420-425 (2003). This rejection is respectfully traversed.

The examiner states that Halazy teaches several benzothiazole compounds useful for treating disorders of the immune system and that such benzothiazoles are useful in inhibiting JNKs. The examiner also alleges that JNKs are known at the time of the instant invention to be implicated in metabolic disorders mediated by insulin resistance or hyperglycemia such as type 2 diabetes, inadequate glucose tolerance and obesity. The applied Bennett reference is relied on by the examiner as evidence of a prior art teaching that JNK inhibitors are useful in treating insulin resistance, diabetes and obesity. The examiner continues to hold that, contrary to applicants' argument, Figure 2 on page 422 shows

lowering of the level of not only glucose in the plasma but also that of insulin in the plasma.

Applicants respectfully disagree with the examiner's position on what is being taught by Bennett. Figure 2 clearly shows that the level of plasma insulin is higher with the JNK inhibitor CC105 compared to the vehicle. In particular, the level of insulin rises from around 20 ng/mL up to more than 30 ng/mL in mice treated with the JNK inhibitor CC105, whereas the insulin level stays below 5 ng/mL when mice is only given the vehicle. Furthermore, Bennett unambiguously states on page 422, first column, that in Figure 2, "we observed increased plasma insulin [...] in animals treated with JNK inhibitor."

Figure 3 also clearly shows that the concentration of secreted insulin has been increased in pancreatic islet from JNK inhibitor-treated mice, compared to the islet from vehicle-treated mice. Bennett confirms also on page 422, first column, that in Figure 3, "pancreatic islet cell showed marked improvement in [...] insulin release." Bennett concludes on page 423, second column, that "the JNK inhibitors have potential to show long-term benefit [...] in turn allowing increased insulin secretion". Therefore, Bennett teaches without any doubt that the JNK inhibitor CC105 increases the plasma insulin level.

Even though the term "diabetes type II" appears in the Bennett (e.g., page 420, second column), it is well known to those skilled in the art that the increase in insulin level is contraindicative in the treatment of insulin resistance or type II diabetes. This is because the disease is characterized by an already high level of insulin, as, e.g., disclosed on page 1, lines 20-22 of the present specification. On the contrary, the present application discloses compounds of formula (I) which allow for decreasing the abnormally high level of insulin down to a more functional value, and therefore to treat type II diabetes and metabolic disorders mediated by insulin resistance and hyperglycemia. Although the compounds of formula (I) are known to be JNK inhibitors, they are not said to treat the claimed indications through the specific JNK pathway. They are structurally different from the CC105 inhibitor disclosed in Bennett and show different biological effects, i.e., decrease of plasma insulin levels, which could have not been expected from the teachings of the prior art.

The present claims are amended to recite that the method decreases the insulin level in treating the metabolic disorder, e.g., type 2 diabetes, as supported in the present specification at page 30, lines 5-16. Therefore, the present

invention is indeed unobvious to one of ordinary skill in the art reading both Halazy and Bennett.

Reconsideration and withdrawal of the rejection are therefore respectfully requested.

Claims 1-20 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Gaillard et al., WO 03/091249, in view of Bennett. This rejection is respectfully traversed.

The examiner states that Gaillard teaches several benzothiazole compounds, which include the instant compounds, useful for treating ischemic disorders and that while the method of use taught by Gaillard is different from the present claims, Gaillard teaches their use in inhibiting JNKs. The examiner then applies Bennett in the same manner as in the preceding §103(a) obviousness rejection.

However, as argued above, Bennett's teaching in combination with Halazy would not motivate or make obvious to one of ordinary skill in the art to use the benzothiazole compounds of Halazy in the presently claimed method. Likewise, Bennett's teaching in combination with Gaillard would also not motivate or make obvious to one of ordinary skill in the art to use the benzothiazole compounds of Gaillard in the presently claimed method.

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Reconsideration and withdrawal of the rejection are
therefore respectfully requested.

In view of the above, the claims define patentable
subject matter warranting their allowance. Favorable
consideration and early allowance are earnestly urged.

Respectfully submitted,

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